

UNCLASSIFIED



FBI Laboratory

2501 Investigation Parkway
Quantico, Virginia 221354940 Fowler Road
Huntsville, Alabama 35898

LABORATORY REPORT

To: Department of State
DS/DO/OSI

Date: February 22, 2019

Attn: SA Jose M. Gonzalez, SA-20
1801 N. Lynn Street
Washington, DC 20522-2008

Case ID No.: [REDACTED]

Lab No.: 2018-00267-14

Communication(s): December 11, 2018

Agency Reference(s):

Subject(s): Isaac N. Gibbons

Victim(s):

Discipline(s): DNA

FBI Laboratory Evidence Designator(s):

Item 9 Fingernail scrapings from (DOS Item #11)

Item 24 Buccal sample from Isaac Gibbons

The items listed above were subjected to nuclear deoxyribonucleic acid (DNA) typing using short tandem repeats (STRs).¹ This report further supplements the results of DNA examinations for item 9 previously reported under FBI Laboratory Number 2018-00267-10 on August 6, 2018.

RESULTS OF NUCLEAR DNA EXAMINATIONS:

The Y-DNA results from GIBBONS were compared to the Y-DNA results from item 2 [initially reported under FBI Laboratory Number 2018-00267-5 in the report dated April 23, 2018]. The autosomal DNA results from GIBBONS were compared to the autosomal DNA results from item 14 [previously reported under FBI Laboratory Number 2018-00267-10 in the report dated August 6, 2018].

Item 2 (vaginal swabs)

The Y-DNA results obtained from item 2 and GIBBONS are the same. Therefore, GIBBONS is a potential male contributor of the DNA obtained from item 2.²

Searching the U.S. Y-STR Database (release 4.2.1), the Y-DNA profile obtained from item 2 has been observed in 0 of 26,007 total individuals within the database. Based on the

UNCLASSIFIED

UNCLASSIFIED

observations of the profile within populations in the database, the likelihood ratios of the match probabilities³ are:

1,471 in the African American population

1,661 in the Caucasian population

1,208 in the Hispanic population

The likelihood ratio of the match probability describes, assuming a single source profile, how much more likely the DNA match² is to occur if GIBBONS is the contributor as opposed to a randomly selected individual from the same population.

Item 9 (fingernail scrapings)

Male Y-DNA was obtained from item 9. GIBBONS is excluded⁴ as a potential contributor to the male Y-DNA obtained from item 9.

Item 14 (swabbing from inside front crotch area of underwear)

No autosomal DNA results unlike GIBBONS were obtained from item 14.

Database Entry Information:

The DNA results obtained from the tested items are not eligible for entry into the Combined DNA Index System (CODIS).

No other nuclear DNA examinations were conducted.

Methods/Limitations:

The following methods and limitations apply to the results/conclusions provided in the results section(s) of this report and are referenced by number in the body of the text for clarity.

¹ DNA typing using the polymerase chain reaction (PCR) was performed with the GlobalFiler™ and/or AmpFℰSTR® Yfiler™ PCR Amplification Kits. The Y-STR loci are located on the male Y-chromosome and are transmitted through a paternal lineage from father to son. Barring mutation, all males in the same paternal lineage have the same Y-STR typing results. A paternal lineage consists of those male relatives to whom the same Y-chromosome has been transmitted from a common ancestor.

UNCLASSIFIED

UNCLASSIFIED

² Barring mutation, any male relative within the same paternal lineage has the same Y-STR profile and would also be expected to be included as a potential contributor.

³ The match probabilities are derived from the frequencies of the profile in the database after applying a 95% upper confidence limit and incorporating the population structure parameter θ .

⁴ Barring mutation, any male relative within the same paternal lineage has the same Y-STR profile and would also be expected to be excluded as a possible contributor.

REMARKS:

The work described in this report was conducted at the Quantico Laboratory. The results will be maintained by the FBI Laboratory for possible future comparisons. This report contains the opinions and interpretations of the issuing examiner and is supported by records retained in the FBI file. The submitted items will be returned to you under separate cover. For questions about the content of this report, please contact Forensic Examiner Brandon McCollum at [REDACTED]

In addition to the evidence in the case, the DNA Casework Unit has generated secondary evidence that will also be returned to you. The secondary evidence can be found in a package marked DNA Casework Unit Secondary Evidence. It is recommended that this evidence be stored in a refrigerator or freezer and isolated from evidence that has not been examined.

Brandon McCollum
DNA Casework Unit

UNCLASSIFIED